component 80*a* from the peripheral excess foil 80*b* to complete the process. Dam tube 96, mold ring 98 and plug 104 are then removed from the completed product.

The present invention also permits inclusion of a waveguide or other transmitting apparatus which must be extended through the completed article. An opening for such inclusion may be formed, as also shown in FIGS. 14 and 15, with the aid of a feedhole punch 112. The punch is supported in the assembly and extends through cover plug 104 into contact with blank 80, in line with a receiving hole 114 in mandrel 92. Foam 102, as previously described, is then placed within the cavity defined by tube 96, mold ring 98 and cover 100. The feedhole punch is then driven through blank 80 before curing of foam 102 is complete. After full curing of the foam, punch 112 is removed, followed by separation of formed surface 80*a* from its peripheral excess foil 80*b* and removal of the container accessories (tube 96, mold ring 98 and plug 104).

A typical reflecting surface was fabricated using the following process steps. A press assembly including holder 82 was heated to 45° C. All metal washer debris were removed from all recesses including that in which the feedhole punch was to travel. After all parts were cleaned, a release agent was sprayed on the taper of clamp cutter ring 108, cylinder edge 106 and feedhole punch 112. O-rings 90, after being washed in acetone to maximize their frictional engaging properties, were installed in recesses 88. Tube 96 and ring 98 also were sprayed with the release agent and assembled. Any remaining areas which might have come in contact with the foam backing further were sprayed with the release agent. The copper foil was then cut to a generally circular pattern to define a blank 80 and the blank was washed with acetone to assure good bonding to the foam. Forming piston or mandrel 92 was then checked to be in its retracted position and blank 80 was installed on top of the O-ring on clamping ring 86. Clamping ring 84 and its O-ring were then installed atop copper blank 80 and rings 84 and 86 were secured together in any convenient manner, such as by means of nuts and bolts as depicted in FIG. 4. A clamping force of 4,000 psi was applied between the clamping rings and the pressure was kept constant. Mandrel 92 was then slowly advanced until a pressure of 1,000 psi was applied to the blank, and then held constant. Feedhole punch 112 was placed in position and advanced to form a feedhole pilot hole in blank 80. Dam tube 96 and ring 98 were then installed. Suitable amounts of FPH resin and catalyst 12-4H were mixed together until they became clear and foaming began. When the heat from the exothermic reaction became noticeable, the mixture was emptied into the cavity formed by dam tube 96, and cover plug 104 was then inserted and securely affixed to ring 98, dam 96 and blank 82. After a period of approximately five minutes, mandrel 92 was further advanced to increase the pressure to 5,000 psi to pinch the blank between periphery 106 and cutting edge 108. Feedhole punch 112 was then completely driven into the mandrel to complete formation of the hole through reflective base 80*a*. After an additional thirty minute period while the pressures were held, the feedhole punch was removed and the pressures on mandrel 92 and between ings 84 and 86 were released. The product was then lifted out and readied for assembly in the equipment for which it was intended.

Although the invention has been described with reference to particular embodiments thereof, it should be realized that various changes and modifications may be made therein without departing from the spirit and scope of the invention.

What is claimed is:

1. A method for forming a precisely curved surface comprising the sequential steps of applying substantially uniform isotropic and radially extending forces upon a substantially planar plastically deformable blank, and plastically deforming the blank to permanently form the precisely curved surface.

2. A method for forming a precisely curved surface comprising the sequential steps of:

positioning a substantially planar blank between a pair of claiming rings in which at least one clamping ring includes an annular recess facing the blank adjacent its edge periphery;

utilizing at least one O-ring having a thickness greater than the depth of the annular recess, an inner diameter which is approximately equal to the inner diameter of the annular recess and an outer diameter which is smaller than the outer diameter of the annular recess;

placing the O-ring in the annular recess;

bringing the clamping rings together to compress and expand the O-ring towards the outer diameter of the annular recess and to frictionally drag the blank outwardly therewith, to apply substantially uniform isotropic and radially extending forces on the blank; and

deforming the blank into the surface.

3. A method according to claim 2 further comprising the step of mechanically clamping opposed sides of the blank between peripheral surfaces on the rings adjacent the O-ring after applying the isotropic and radially extending forces on the blank.

4. A method for forming a precisely curved surface comprising the sequential steps of applying substantially uniform isotropic and radially extending forces upon a substantially planar plastically deformable blank, and plastically deforming the blank by exerting a unidirectional, generally normally extending pressure upon the blank to permanently form the precisely curved surface.

5. A method according to claim 4 wherein said pressure exerting step comprises the step of exerting a positive pressure upon the blank.

6. A method according to claim 5 wherein said positive pressure exerting step comprises the step of advancing a mandrel, having a face contoured to define the precisely curved surface, into contact with the blank for effecting said plastically deforming step.

7. A method according to claim 6 further comprising the step of securing a rigid backing to the precisely curved surface.

8. A method according to claim 7 wherein said securing step comprises the step of molding a foamable resin as the rigid backing to the precisely curved surface.

9. A method according to claims 7 or 8 wherein the blank is positioned at its periphery adjacent a cutting edge and further comprising the step of advancing the mandrel further against the precisely curved surface and into pinching contact with the cutting edge to shear the blank periphery from the precisely curved surface.

10. A method for forming a precisely curved surface comprising the sequential steps of applying substantially uniform isotropic and radially extending forces upon a substantially planar plastically deformable blank, and plastically deforming the blank by exerting a force upon the blank generally localized at its center to perma-